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ABSTRACT

This longitudinal study explored (1) the power of the mother relative to affect achievement behaviors and achievement test outcomes in a sample of low-income black youth; (2) the potential role of teacher evaluation in these outcomes; and (3) the relationship between self-esteem and achievement orientation to a child's academic performance. From 1965 to 1973 56 middle school children (grades 6-8) and 40 of their mothers were studied. Variables measured were the mother's feelings toward her child, the emphasis put on academic achievement, her aspirations for her child, her relationship to the broader community, her attitudes toward the school and the stability of the child's home life. Children were given various academic and intelligence tests and were assessed on 6 personality variables. Data were organized into 9 tables, each of which are discussed individually. Results indicate that there is an early impact of the schooling experience on the children and their families which has implications for both personal-social and cognitive performance outcomes. The results also indicate that teacher evaluations and judgments interact with parental influences to produce these performance outcomes. In addition, it is suggested that parent-to-child or teacher-to-child models may be too simplistic for characterization of minority children's achievement behaviors, particularly after these children are engaged in formal schooling for an extended period. (SB)

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Relation of Early Parent-Teacher Socialization Influences to Achievement Orientation and Self-Esteem in Middle Childhood Among Low-income Black Children

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Introduction and Background

Clausen, in a 1968 article published in Socialization and Society, suggested that childhood socialization is a cumulative process. In his view, too few child development researchers have studied the interactive effects of diverse socialization agents on the child's development in non-deviant populations. For those of us interested in childhood socialization, particularly the interface between child development and early education, Clausen's comments have particular significance. We need to know how to design studies such that they yield maximal information about the relationships between family, schooling, and childhood outcomes. We also need data which will permit development of realistic expectations and goals, relative to program planning, for educational intervention into the lives of minority youth and their families. This paper may provide some insights into both of the above issues.

In 1967, Coopersmith defined self-esteem as the attribution of positive or negative attitudes toward oneself. Among the social experiences antecedent to the development of positive self-esteem, he included the individual's history of successes, relative to his own values and aspirations, and the amount of respectful, accepting, concerned treatment he receives from significant others. However, he concluded from his research with middle-class white preadolescent males that parental factors almost singularly contributed to this development of self esteem. Although his book is entitled The Antecedents of Self-Esteem, the book is devoted to the parental antecedents or correlates of this aspect of childhood personality.

Katz (1967), reviewing his experimental studies of black youth in fifth-sixth grades, noted that academically unsuccessful boys engaged in significantly more self-criticism than successful boys, even when the experiment was so designed that both groups would succeed. He concluded that such self-criticism could be an

effort to reduce anticipatory anxiety in achieving situations, due to a prior history of negative reinforcements from parents. This interpretation was quite consistent with the existing literature which has emphasized the adversive influences of black low-income parents' childrearing practices upon the socialization of achievement motivation and cognitive processes in their young children. (See reviews by Freeberg and Payne, 1967; Hess, 1970; and Deutsch, 1973.) For example, Roberts (1971), in another longitudinal study of black American children in Nashville, Tennessee, attributes the mean decline in these children's Binet I.Q. over the five year period to familial patterns of socialization of achievement motivation, particularly academic achievement motivation.

In an unpublished review of 13 studies of black high and low school achievers, ages 4-16, Lang (1969?) concludes that higher achievers differ from their lower achieving peers primarily in the areas of self-esteem, positive responsivity to adult authority figures, and verbal fluency, rather than in familial background variables, including attitudes and values. Coleman (1966) and others have reported similar findings, suggesting that a sense of personal control or personal efficacy regarding the ability to influence others and confidence in one's own ability are the most important correlates of minority students' school achievements. Lane (1973) reports that retrospective examination of the childhood records of 22 black college graduates from poverty backgrounds revealed that, by comparison to siblings, these students showed a marked increase in average I.Q. scores around the eighth grade. Lane believes this suggests early outside influences which extend beyond the immediate family.

Klaus (1973), however, in a recent longitudinal study of black and white New York school children, concludes that emphases in the educational area as to the importance of teacher expectancies and behaviors to the development of academic competencies in low-income black youth may be exaggerated (see, for example, Clark

(1965); Rosenthal and Jacobson, 1968; Rist, 1973). He notes that in his study teacher knowledge of I.Q. neither affected teacher expectancy nor pupil test performance. Race of teacher was also not a factor in pupil test performance. He implies that the parents of lower achieving children lack the mechanisms for appropriate socialization of achievement behaviors in that, while they aspire to college attendance for their children, they also believe that their children should pursue "anything which would make them happy." (Page 149.) Similar data are introduced by Rosen (1959) in his comparative study of parental achievement values among diverse ethnic groups. He concludes that, while black American mothers had high aspirations for their children, they were more likely, by comparison to mothers from other ethnic groups, to accept lower status positions for their children in the broader society.

Despite efforts by Minuchin, et al. (1969) in this area, studies of white middle-class students do not reveal an impact of the school experience upon these children and their families (Wallach, 1971). In fact, Jencks (1972) has concluded that for American pupils there are no long-term effects of schools upon its pupils. Perhaps only in England have Himmelweit and Swift (1969) been able to document the relationship between type of school attended (roughly equivalent to high school), and long-term occupational outcomes independent of familial social class background.

This longitudinal study attempts to explore some of the assumptions in the preceding studies, specifically (1) the power of the parent, in this instance the mother, relative to achievement behaviors and achievement test outcomes in a sample of low-income black youth; (2) the potential role of teacher evaluations in these outcomes; and (3) the relationship between self-esteem and achievement orientation to the children's academic performance. A longitudinal design is employed because we are especially interested in an examination of the hypothesis of discontinuity between the home and school contexts as experienced by low-income black, but perhaps not middle-class income white, pupils and their families, upon formal school

entry.[1]

We envision at least six areas in which the school experience could affect family life through the mother as related to her child. In each area the themes of perceived self-esteem, potency, and resources are salient, as these are the psychological counterparts of the sociological issues of prestige, power, and privilege raised by the social status positioning of these families in relation to the schools many of their children attend. These areas, to be explored in the present study, include: (1) the maternal expectations or aspirations held for the child; (2) the expressed educational philosophy of the mother; (3) the perceived sense of maternal potency relative to the school social system; (4) the quality of personal-social communication between mother and child relative to educational processes; (5) the participation of the family in the broader community; and (6) the stability of the child's family life.

We envision at least three dimensions of child behavior which are related to positive, adaptive coping behavior in the school environment: the capacity (1) to relate constructively to peers and teachers; (2) to be independent and self-reliant relative to his school work; and (3) to be interested in competing and excelling against standards of excellence in an academic context. We believe that the child's history of successes or failures in these areas, as perceived by significant others, may have an influence on his own sense of self-worth. We assume that, at least in the early years of schooling, parents and teachers constitute the child's most significant others.

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[1]Data to be reported here do not include the results of a detailed analysis of child and maternal perceptions of schooling and the school experience; these data will be reported later.

Method and Procedures of the Study

A. Sampling Procedures and Sample Characteristics

The sample for this research consists of 56 middle school children and 40 of their mothers. Thirty children are males and 26 are females. In 1965, 90 mother-child dyads (45 males, 45 females) were studied by this researcher at the point at which the children entered an eight-week summer Head Start program in Evanston, Illinois. At that time all of the families met the poverty guidelines for urban areas of the Office of Economic Opportunity. In 1965, 48.2% of the 56 families relocated were composed of father-present/mother-working parents; in 1973, this percentage had dropped to 43.6%. In 1965, 8.5% of the 56 relocated families received welfare payments; in 1973, 16.4% received such payments. No child was included in the 1965 study who had been identified by teachers or school social workers as having severe learning or emotional problems. In 1971, 64 of the 90 dyads were relocated; 56 agreed to participate in the present study.

Relocation was facilitated through examination of school records. Of the 64 relocated children, four parents refused to permit their children to be part of the 1971 study. Two children refused when contacted after parental permission had been given. Two children apparently left the school system during the intervening period between relocation in the summer of 1971 and the initiation of child interviews in the summer of 1972. The delay was unavoidable because of the funding status of this research, which did not permit simultaneous hiring of large numbers of staff.

Of the 16 relocated and participating families whose mothers were not interviewed, seven could not be contacted by two part-time interviewers before the end of the data collection period. Two families moved. Four families granted permission for their children, but not for themselves. Our interviews with the children of these families have given us no reason to believe that these mothers are dramatically different from the other 40 who were interviewed.

The 56 present and 34 attrited samples were contrasted on all possible early variables presented in the present report. There were no significant differences in mean scores on maternal attitude measures between the two groups. Mothers of children in the present sample were significantly older in 1965 (31-35 years) than mothers of children in the attrited sample (26-30 years), but there were no significant differences in educational level or average number of children in the household.

There was a tendency for the 56 study children to have been judged as more intellectually competent, by standardized test data ($p < .05$), and more motivated for school achievement, by Head Start preschool teachers ($p < .05$), than the 34 attrited children.

In addition to examination of mean differences between present and attrited samples on maternal and child variables from 1965, we also examined intercorrelation matrices. We found the correlates of maternal and child variables to be similar for both samples except in the following instances. There was a significant and positive correlation between maternal age and maternal control style and between maternal education and value for school achievement in the present, but not attrited, sample. Number of children in the 1965 household was positively correlated with Binet Mental Age in the attrited, but not present, sample. In the present sample, but not the attrited group, number of children in the 1965 household was positively correlated with Head Start teacher ratings of higher levels of verbal-social participated in their classrooms.

We found no preschool classroom effects on any maternal or child variables, and we also found that attrition, by elementary school attended, was random. The 56 remaining children attended 14 of 16 possible elementary schools, with a maximum of 9 children and a minimum of 1 at any one school.

In general, comparisons of the present and the attrited samples suggest that the latter sample of children was composed of children less psychologically

mature than our current group upon school entry. Their mothers tended to be younger ($p < .05$), to have more formal education ($p < .05$), but not necessarily better parenting strategies, than mothers in the present sample. Klaus (1973), reporting similar findings for his New York children, had additional evidence that his attrited group was, in fact, downwardly mobile. We believe we have a similar situation for at least two reasons: first, in 1965 the present sample constituted the somewhat better organized children, and second, the school system they currently attend has an excellent academic reputation.

The subsequent academic achievements of the 56 study children, as measured by standardized tests administered in grades kindergarten through four (K-4), were not impressive. With each year, an increasing percentage of children achieved below national norms on the tests used. This percentage increased from 68.9% at the end of kindergarten to approximately 93.5% by grade four. In the summer of 1965, the Binet I.Q.'s of these children ranged from 129-58, with a mean of 92.7 (s.d. = 14.9). Data on these students in 1969 (grade four) must be considered in historical school context.

When these students entered grade two in 1967, the Evanston school system began a systematic program of school transfers toward the goal of integration of the 16 elementary schools servicing grades K-5. The four middle schools (grades 6-8) had been desegregated for some time. In August, 1971, just prior to the initiation of this study, the Evanston Educational Testing Service (ETS Mid-western branch) published a longitudinal report entitled: Integration in Evanston: 1967-71. This report indicates that grade four reading scores on the Sequential Tests of Educational Progress (STEP) in 1969 for the student population were as follows: (1) mean score for 848 white pupils = 251.0 (s.d. = 16.5); (2) mean score for 243 black pupils = 235.4 (s.d. = 9.2); (3) the range of scores for the 1091 students sampled was 303-226. The mean score on STEP at grade four for our

own students, all black, was consistent with these findings; 234.9 (s.d. = 15.2). The Evanston Testing Service reported that Evanston norms for black students were lower than for whites, but similar to those of the black pupils of the ETS Growth Study of 35,000 pupils. However, Evanston white students were consistently performing above the ETS Growth Study norms.

Our student population had, by grade four, experienced an eight-week Head Start program, and desegregation for two years, by comparison to earlier cohorts (i.e., 1967 and 1968), but their academic performance had been only slightly affected. There were no significant differences between the academic test performances of children in the present sample and a matched non-Head Start control group in grades K-4. The Evanston Integration Study reported that this cohort performed slightly better than the cohorts of the preceding years, before the elementary schools were desegregated.

We believe it important to indicate, since this particular study included no direct classroom observations or study of teacher attitudes, the conclusions of the Evanston Integration Study. Classroom observations in 1968-69 of first and second graders (our children were in the third and fourth grades at the time) revealed that white children were physically active in the classroom relative to school work activities such as moving from their seats to the teacher's desk or to reference shelves. Black students gave more attention to persons other than the teacher; black boys, in particular, were least likely to interact with anyone of the same race or sex as themselves. Both groups of students seemed to share in participation of planning of classroom group projects. Teacher perceptions of positive student traits were almost uniformly attributed to white, rather than black students.

At the time of maternal and child interviews in 1972-73, the children were concentrated in one of four possible middle schools, the one traditionally servicing the poorer classes of families in this affluent community. Twenty-seven

of 56, or 48.2 per cent, of the children attended this one school, while 12, 7, and 10 children attended one of the other three schools. The two-and-one-half-hour interview with each child during the third time period of this study was administered at each child's respective middle school. Maternal interviews were administered in both instances at the child's home.

In the present sample, there was a dramatic increase in the number of children in the household from 1965-72 in only two instances among the 40 mothers reinterviewed. One mother had five more children, and another grandmother who was, in 1965, rearing all five of one daughter's children, was joined by another daughter who had five children of her own. Five other families reported an increase of one child. Twelve reported one to three fewer children in the household. Since the "mother" of the child was identified for purposes of the 1965 study as that female who had primary responsibility for the daily care and welfare of the child, current households with fewer children reflect the discrepant ages of the mothers interviewed as well as, perhaps, altered living arrangements in some instances so that fewer relatives shared the same household.

A record of each child's birth order relative to living children was not obtained in 1965; however, the 40 reinterviewed mothers were queried about the target child's birth order in 1973. Nine children were only or first-born; nine were second-born, nine third-born, 13 fourth- or later-born.

To summarize, in 1973, the mothers in the present sample averaged 40 years of age (range 28-58 years), had 10.7 years of formal education (as of 1965) with six mothers reporting school attendance since 1965, though no additional degrees were awarded. They reported an average of 3.9 children in their households (range = 1-10). Birth orders of their children averaged 2.9 (range = 1-6). There was a net loss of two fathers in the 56 households, and relatively few instances of economic or educational gains made by parents. Twenty-eight of 40 mothers (70%)

reinterviewed reported major changes in their family over the intervening years, 1965-73. Families either survived at their original level of economic and psychosocial balance, or had been challenged by new crises which were not always favorably resolved. The families lived in a striving and economically prosperous white middle- to upper-middle-class community and had, according to our parent interviews, assimilated many of the values of that community of 80,000. They constituted, as black Americans, approximately 16 per cent of the population. Many of the families in our study, if not most, do not have the resources to implement these valued life styles. The findings are probably generalizable to all such comparable black American populations. They are probably not generalizable to either severely deprived low income urban or rural communities, or to comparatively affluent black middle class communities.

B. Maternal Variables and Measures

Chart I presents the list of maternal variables assessed from interview data in 1965 and 1973. In a principal component analysis of the 1965 data, variables 5, 3, and 2 loaded on Factor I in that order of priority; variables 4, 6, and 1 loaded on Factor II.[2,3]

Variables 5, 3, and 2, Warmth expressed towards the child; Cognitive controls used with child; and Individuation of the child's personality, emphasize the quality of personal communication between mother and child. Variable 2 focuses on maternal

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[2]Variable 7, Cooperation with the interviewer, was a control variable and will not be discussed in this paper.

[3]Variable 8 is the average rating of variables 1, 2, and 3. Variable 8 is discussed in a 1969 article by this author, published in Educational Horizons. It refers to the mother's report of behaviors thought to be cognitively stimulating to young preschool children. Since factor analyses revealed one of the three variables to be loaded on a separate factor (variable 1), data are presented independently for each variable 1, 2, and 3.

awareness of the child's age-related personal and social needs; 3 on the style of monitoring of the child's experiences, and 5 on the amount of encouraged sharing of these experiences. Factor I refers to dimension (4) as outlined on page 4 of this paper.

Variables 4, 6, and 1, Value for school achievement; Social contacts of the mother; and Concepts used in family problem-solving emphasize the quality of the family's relationship with the broader community as perceived by the mother. Variable 4 focuses upon the expectations or aspirations the mother might have for her child, as well as her apparent investment in their realization; 6 on the degree of differentiation of the mother's current life space, relative to the broader community; and 1 on the mother's tendency to use past and present experiences to form guidelines for decision-making. Factor II refers to dimensions (1) and (5) as outlined on page 4 of this paper.

Variables 9, 10, and 11 emphasize maternal attitudes toward the school. Variable 9 assesses the mother's perceived influence on the school; 10 an aspect of her educational philosophy, the degree of emphasis on learning the "3 R's", and variable 11 her regard for teachers and school curricula. Variable 9 refers to dimension (3); Variables 10, 11 to dimension (2).

Variable 12, assessed only in 1973, attempts to indicate the amount of perceived discontinuities in family life during the child's early school years. This variable refers to dimension (6).

Specific definitions of the first eight variables, listed in Chart I, are presented in two coding manuals which can be obtained from this researcher, one for 1965, and one for 1973. The manuals present definitions, measures, and coding criteria.

The most important aspect of the procedures of the study, relative to assessment of maternal variables, was the attempt to establish comparability between

identical psychosocial processes assessed at two different periods in the parent and child's development. Initial measurement in 1965 of the maternal variables, the first eight presented in Chart I, employed a technique used by Dyk and Witkin (1965) to evaluate maternal interview material. The presence of specific indicators was used to determine whether or not a mother could be viewed as "high" or "low" on a particular variable. These indicators were chosen as age-appropriate indices of a particular kind of maternal-child interaction, and were theoretically determined by this researcher. They assessed specific attributes of mother-child interaction which were thought to be important "signs" of the presence of certain psychosocial processes in the child's home. These indicators could never be more than probability statements of what might actually occur.

In the 1965 and 1973 manuals, the indicators presumed associated with each of the first six variables are delineated and the presence (+) or absence (-) of each of these is tested. The final rating is the sum of the "plus" indicators, with a score of "1" indicating that no indicators are present, and a score of "7" indicating all indicators are present.

Comparability in 1972-3 was defined in primarily two ways: (1) identical interview item, and (2) revision of the item(s) for age-status and school experience. For example, a mother was not asked in 1973 what she would do if her child refused to go to bed, but what she would do if he refused to do his homework. During all coding, each variable was rated on all cases, before proceeding to the next variable. At no time were the coders aware of the children's scores on the diverse measures.

The median per cent agreement per indicator scale on 18% of the cases at Time I, and 30% of the cases at Time III was .810 in 1965 (range = .762 - .929) and .842 in 1973 (range = .703 - .904). Rank-order correlations of actual scale scores, of course, were much higher.

Variables 9-11 were assessed with items derived from principal component analysis of a 26-item Educational Attitude Survey developed by Hess and Shipman (1969) and cross-validated by Slaughter in 1970. Mothers are to indicate agreement or disagreement on a 5-point scale relative to four short items per variable. The maximum factor score, the positive end, is 5.0. This score is obtained by dividing the respondent's factor sum score by the four items in each factor.

Variable 12 was assessed through questions of the mother as to major changes in life, such as moving to different housing, illness of a family member, financial problems, etc. A high score of "7" indicates that the mother reported changes in all six areas of inquiry, while a low score of "1" indicates no reported changes.

C. Child Variables and Measures

In addition to child achievement performance measures used here, including the Binet in preschool, the Metropolitan Reading Readiness Test at the end of kindergarten, and the Sequential Tests of Educational Progress at the beginning of grade four, Chart II presents the list of child personality variables assessed. Three were assessed from teacher and observer ratings of classroom behavior in 1965, and observer ratings of interview data in 1973. In 1973, three direct measures of the child's attitudes toward self, school, and life were taken: (1) the Coopersmith Self-Esteem Inventory, (2) the Meadors-Slaughter Satisfaction with School Inventory, and (3) the three Coleman report (1966) personal control items. These variables emphasize the child's personality characteristics, as judged from self or other's perceptions. The Kuder-Richardson 20 reliability for the Coopersmith Self-Esteem Inventory with this population is .98; test-retest reliability is .68. The Spearman-Brown internal consistency coefficient for the Satisfaction with School Inventory is .55.

At Time I, teacher and observer ratings on Verbal-Social Participation, Independence and Achievement Motivation correlate .68 (Pearson r), .30, and .26 respectively. For this reason, they are treated separately in data analyses; apparently the child development observers and the preschool teachers entered different criteria into their judgments of the personality characteristics of each of the children. In 1973, agreements between two observers on 20 cases were .81, .65, and .76 respectively for the Verbal-Social, Independence, and Achievement Motivation scales.

At Time I, each of these three variables was assessed on a seven-point rating scale adapted from the Zigler Behavior Inventory. This adapted 23-item instrument had been used to rate 177 black preschool children in three different preschool settings. Observer and teacher ratings were factored by principal component analysis (Hess, Kramer, Slaughter, et al., 1966). Three of the five factors, those identified above, were used in the 1965 study, whose primary focus was the cognitive performance outcomes of the children, rather than their personal-social development. Each factor contained four items, to be rated on a seven-point scale. The Verbal-Social Participation and Independence scales range from 1 (high) to 7 (low), while the Achievement Motivation scale ranges from 7 (high) to 1 (low).

The four rated dimensions of Verbal-Social Participation include: (1) Talks eagerly to adults about his own experiences and what he thinks; (2) Likes to talk or socialize with the teacher; (3) Is eager to inform other children of the experiences he has had; and (4) Asks many questions for information about things, persons, etc. The rated dimensions of Independence include: (1) Tries to figure out things for himself before asking adults or children for help; (2) Does not need attention or approval from adults to sustain him in his work; (3) Appears to trust in his own abilities; and (4) Goes about his activities with a minimum of assistance from others. The rated dimensions of Achievement Motivation,

expressed in the Zigler Inventory from the perspective of low Achievement Motivation, include: (1) Discontinues activity after exerting a minimum of effort; (2) When faced with a difficult task, either does not attempt it or gives up quickly; (3) Seems disinterested in the general quality of his performance; and (4) Is lethargic or apathetic; has little energy or drive.

Because observational data were not available at Time III, an extensive effort was undertaken to establish comparability of observer perceptions.[4] This involved simultaneous selection by this researcher and two observers of potential interview questions which could elicit information related to each factor item, a series of meetings to reach consensus on these questions and the respective coding criteria, as well as the final rating of 20 cases of Evanston children not in this longitudinal study, but matched with this sample for race, socioeconomic status, year of birth, and length of time in the Evanston school system. These 20 cases were randomly selected from an additional pool of 31 interviews available.

Charts II and III also describe our use of teacher grades in this study to index the history of the child's successes and failures relative to teacher-student interaction.

At the end of each academic year, each child's teacher evaluated the progress in three academic areas: reading (reading readiness in kindergarten), language, and mathematics (number readiness in kindergarten). This information was recorded on the cumulative record cards as: Doing Well, Making Acceptable Progress, or Needs Improvement. The subcategories, by grade, under which these judgments were made, are listed in Chart III. Doing Well was coded as 3; Making

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[4]At Time III, the three observer scales had a median intercorrelation of .53. The Coopersmith Self-Esteem Inventory correlated .31 ($p < .05$) with the Meadors-Slaughter Satisfaction with School Inventory and .47 ($p < .01$) with the Coleman personal control or potency score. Observer ratings and direct measures of self-other perceptions were not significantly correlated.

Acceptable Progress as 2; and Needs Improvement as 1. The maximum score in each area, therefore, was three times the number of subcategories. For example, the maximum score for reading readiness in kindergarten = 3 x 4 (number of subcategories) = 12, while the maximum score for mathematics in grade 5 = 3 x 3 = 9. The corresponding minimum scores are 4 and 3. In the few instances where there was no information on a particular subcategory, a 2 (the equivalent of Making Acceptable Progress) was recorded.

In the instance of grades two and three, an average score was computed, and similarly for grades four and five for each of the three areas: reading, language and mathematics. This was possible because the cumulative rating forms for grades two and three, and grades four and five, are identical.

A profile of each child's progress was then constructed. Each of the frequency distributions of the 12 variables above were separately inspected and divisions made according to those scores in the following percentiles: (1) 1-20%; (2) 21-40%; (3) 41-60%; (4) 61-80%; (5) 81-100%. A child whose score placed him in the top 20 per cent is, therefore, a child for whom 80% of his classmates are behind him. It is important to emphasize, however, that percentile comparisons were introduced by the research and not in the original teacher evaluations.

In the research, each child was given a percentile standing from one (high) to five (low) in the subject area for each grade (i.e. on the 12 variables listed in Chart III). The median percentile standing for each of the three subject matter areas was then computed for each child. Any movement of two or more percentile standings in either a positive or negative direction was defined as a significant change. Movement from the top 20% to 60% was, for example, considered a significant change, while movement from 20% to 40% was not. It was hoped to thereby somewhat compensate for error of measurement and regression factors in repeated individual evaluations.

All profiles and other academic information on each child were then examined according to the following criteria: (1) evidence for a significant percentile standing change in teacher evaluations between the kindergarten and fourth and fifth years and at any points in between; (2) evidence of the direction of the change, if any; (3) whether or not the child was retained by the school during the primary grades; and (4) whether the retention seemed to result in improved evaluations (i.e. at or beyond the level of performance prior to the problem year(s)) or average standing (in one or two instances children were identified during the kindergarten year and performance was judged improved to average standing in later years. Most children were identified either after grades one or two; and revealed no significant improvement after retention.).

The following patterns were identified for the 56 children reinterviewed in the present study:

Pattern 4 (N = 24): No change; average or above average in teacher academic evaluations throughout the years kindergarten to grade five.

Pattern 3 (N = 5): Change from low standing to at least average standing; children typically identified in early years, kindergarten or grade one, retained, and judged later as improving by teachers.

Pattern 2 (N = 12): No change, below average in academic standing from earliest years, and retention did not result in later improvement, according to teacher evaluations.

Pattern 1 (N = 15): Change from average or above standing to a lower standing; typically never identified by school personnel for special services.

Other, theoretically possible, patterns did not occur with any observed regularity. These four patterns constitute the Index of academic consistency relative to teacher-student interaction. The patterns form a nominal scale. Each is viewed as a discrete separate entity. The distributions by patterns

according to children whose mothers were also reinterviewed are as follows: pattern 4 (N = 17); pattern 3 (N = 4); pattern 2 (N = 8); pattern 1 (N = 11).

For purposes of this report, Pattern 4 students will be referred to as Achievers. Pattern 3 students will be identified as Proachievers. Pattern 2 students will be identified as Nonachievers, and Pattern 1 students will be identified as Antiachievers.

Results

The results of this study are presented in Table 1-9b. Table 1 presents the correlations between maternal and child variables for the 56 dyads in 1965 at Time I of the study. Maternal variables and child personality variables were assessed within the first four weeks of the 1965 summer Head Start program. The Stanford-Binet was also administered at that time. The Metropolitan Readiness Test was administered at the end of kindergarten in Spring, 1966. There is a rather striking relationship between reported maternal behaviors and attitudes and the children's achievements upon school entry. There is also a relationship between observed behavioral attributes of the children, particularly their observed verbal-social participation and persistence on tasks in the classroom, and their own performance outcomes in test situations. We also found that maternal control style (variable 9) and teacher/observer perceptions of achievement motivation were significantly correlated (.39 and .35 respectively, $p \leq .05$). Similarly, maternal control style and teacher's perceptions of the child's verbal-social participation in the classroom were significantly correlated (- .25, $p \leq .05$).

We believe that subtleties in expression of independent behavior at this early age level account for the absence of significant findings relative to this variable. Specifically, our rating does not adequately distinguish between children who are emotionally dependent from those who are instrumentally dependent

when, presumably, it is the latter which is most important in educational contexts. Some children may have been perceived as emotionally dependent and uncertain, when in fact they sought task-related assistance in ways which were quite age-appropriate.

Whether the mother chooses to monitor her child through personalized forms of control, as contrasted with age or sex normative prescriptions for behavior, seems to be related to both child achievement performance and personality characteristics in educational contexts in this 4-5-year-old age period. Maternal affect per se, or educational aspirations for the child may be less important. Conversely, maternal attitudes toward the school are also related to child performance outcomes.

Table 2 presents the stability coefficients (Pearson r) in the diagonal of each maternal variable assessed at the two time periods, 1965, and 1973.[5] The right side of the table presents the correlations of all Time III maternal variables, while the left side presents the correlations of Time III variables with every other maternal variable except itself (presented in diagonal) at Time I. The four variables for which there is the greatest stability between Time I and Time III in order of magnitude are: Social contacts of the mother, Warmth toward the child, Value for school achievement, and the summary score (variables 1-3) indexing Maternal Individuation. Table 3 presents data as to the relationship between children's achievement performance in grades K-4, and maternal and child attributes assessed in 1973 (grade 6).

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[5]Of 36 possible correlations between Times I and III on child personality measures, four reached significance at the .05 level. These were (1) teacher and (2) observer ratings of Achievement Motivation at Time I, with observer ratings of Independence at Time III; (3) observer ratings of Verbal-social participation at Times I and III; and (4) observer ratings of Independence at Time I, and perceived School Satisfaction at Time III.

Data in Tables 2 and 3, jointly considered, suggest a variety of important points. First, insofar as the stability of maternal behaviors has relevance for the achievement performances of their children, expressed maternal affectivity and aspirations are most important, rather than explicit styles of monitoring the child's behavior, the latter perhaps being much more subject to immediate social and developmental context. Even the relatively high stability over an eight-year period of mothers' levels of participation in the community has little import in relation to the child's early or later school performance.

Second, recency of assessment has little to do with the relationship between child performance and maternal attributes. The attributes which are significantly correlated are related to performance in the earlier years of schooling, not in the later years.

Third, the assessment of similar child attributes at the sixth grade level is related to child achievement performance in the early and later years of schooling, particularly achievement in the areas of reading and verbal skills. We found no relation between child and maternal attributes assessed at the sixth grade level, except for a correlation of .31 between maternal warmth and child independence in the school context ($p \leq .05$).

Fourth, maternal attitudes toward the school are extremely unstable, by comparison to the other variables. There is essentially no relationship between early and later attitudes toward the school, or between these later attitudes and children's achievements at any grade level. In short, it is not possible to account for the achievement performance, achievement motivation, and self-esteem of these children after school entry by consideration of maternal background factors prior to that entry.

Assuming that our measures of maternal and child variables at both Times I and III are valid, these data suggest some intervening forces have influenced

achievement performance outcomes in the children after school entry. We believe these "intervening forces" to be the history of successes and failures the children have experienced in relation to teacher-student interactions.

Data in Table 4 lend some support to this hypothesis. Data in Table 4 suggest that the trend is for maternal attitudes, as expressed when the child was enrolled in middle school, to be associated with teacher evaluations of that child's performance in the earliest years (grades K-1) of schooling. These descriptive data do not elucidate why this trend exists. It is possible that the mother simply reacts to expressed teacher judgments; it is equally possible that teacher judgments are formed around subtle perceptions of family instability at the point of school entry, an instability which mothers themselves report at Time III, and which seems to relate to some aspects of the child's early school performances (see Tables 3 and 4). It is also possible that mothers react to perceived changes in the child, initiated by the teacher. The important point for us is that there is some discontinuity between the influence of the parents of these children before and after school entry.

Data in Table 5 indicate that the child's independence in school contexts at grade six, and his perceived level of self-esteem are both associated with teacher evaluations of academic performance. The child's verbal-social participation is not consistently associated with teacher evaluations at any grade level. Conversely, preschool teacher evaluations of achievement motivation tend to be important throughout grades K-3. Observer evaluations of achievement motivation at Time III do not seem to be associated with teacher evaluations of academic performance. In short, positive teacher evaluations do not increase the motivational levels of these children, but they do appear to encourage a greater self-confidence in their own abilities and their capacity to function competently in the school setting.

Data in Table 6 present our attempts to characterize the differences in maternal and child variables by history of teacher-student interaction, as indexed by our index of academic consistency. Recall the distinctions between the four groups presented. Achievers (Group IV) have been consistently, according to teachers' judgments, average or above average in academic standing relative to other children in this sample from kindergarten through grade five. Proachievers (Group III) have typically been judged by their teachers as improving in their academic performance over the intervening years; typically, they were identified as having academic difficulties in grades kindergarten-one, retained, and then judged as having improved after the retention experience. Nonachievers were below average relative to this group as a whole and remained in this standing, whether retained or not, from the earliest years of schooling. Antiachievers have consistently changed over the years from average or above standing, according to teachers' judgments, to a lower standing. Typically, they have never been identified for any special school services. The question addressed in Table 6 is whether these four groups differed in any way, upon school entry, on either maternal or child personality variables.

Two significant differences are reported in Table 6. Mothers of proachievers typically had a more "traditional" view of schools than other mothers; they preferred that schools spend more time on reading, writing and arithmetic, reduce time on sports and games, that parents see to it that children work hard in school and not interfere with teachers' right to teach. The second difference must be interpreted cautiously insofar as we believe it may be associated with a lack of homogeneity of variances. The child development observers viewed the subsequently identified nonachievers as being more reticent, relative to other peers and their preschool teacher, than the other children upon school entry. No other differences are observed between these four groups, and maternal attitudes and reported behaviors or child personality variables upon school entry.

Conversely, data in Table 7 reveal four significant differences between these four groups, and consistent trends which seem important. By grade six, mothers of Achievers report expressing higher levels of affection toward them than mothers of children in the other three groups. Their children have consistently higher levels of independence and achievement motivation. Nonachievers are consistently viewed as having lower levels of independence in the school context, lower levels of self-esteem, and a tendency toward a lower level of achievement motivation. Data in Table 3 suggest that these latter three variables are significantly correlated with reading and verbal skills in grade four, as measured by achievement performance tests. Nonachievers also expres the least amount of satisfaction with school, and the least amount of potency relative to personal influence in general life events. It appears that the school experience has maximized differences between the two groups of children in areas of importance to their personal-social development.

However, data in Table 8 reveal that the Achievers and their families may be experiencing only the illusion of academic competency. In actual fact, the average level of reading performance in grade four of all groups most closely approximates that of the Nonachievers, despite initial differences in presumed intellectual competence. For example, mean reading achievement scores of Pro-achievers show a difference of only one point from that of Achievers, despite an initial difference of nearly ten points in Binet I.Q. Differences between Achievers and Nonachievers, upon school entry, were nearly 20 points in the Binet I.Q.; differences between these two groups after six years of schooling are only about eight points. The same is true for those identified as Anti-achievers by comparison to Nonachievers. Finally, it is important to note that there is a tendency for the Achievers to have experienced more stability in family life, by comparison to the other groups. Those whose relationships with

teachers improved (i.e. the Proachievers) showed the greatest amount of early instability. These data, we believe, support the hypothesis of an interactive effect between family, school, and child outcomes, once the child enters the formal school environment.

Data in Tables 9a and 9b lend even greater support to the hypothesis of discontinuity. Table 9a indicates that when mothers with higher and lower levels of individuation are identified from 1965, their children differ by nearly 23 I.Q. points upon school entry.[6] Later, although mothers maintain their relative standing, the children do not differ in average level of reading performance. In fact, these children seem to approximate the level of Nonachievers in actual reading performance. This is in striking contrast to the school norm for white pupils on the same test, reported earlier as 251.0. Five of the nine pupils in Group I were identified as Antiachievers, four as Achievers. Two of the seven pupils in Group II were identified as Achievers, three as Antiachievers, and two as Nonachievers. The children in both groups attended six different elementary schools, with a maximum of two students in any one of those schools. In all, nine different schools were attended by the 16 students at the extremes of our distribution relative to Maternal Individuation in 1965. There was an overlap of three schools between the two groups, accounting for five pupils in Group I, and three pupils in Group II.

Data in Table 9b enable us to consider the possibility that changes in level of maternal individuation influenced the 1970 performance outcomes presented in Table 9a. It seems, however, that more individuating mothers, as identified in 1972-73, do not have children who are significantly different in performance outcomes at either Times I or III. These mothers essentially constituted our

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[6]Groups were identified as one standard deviation above or below the group mean for N = 40.

"average" group in 1965. Their increased participation in their children's intellectual life at this later time period essentially is ineffective as regards the children's academic performance. Rather, it seems that at the later time period, the earlier individuating mothers are now more facilitative or supportive of their children's academic efforts (see Table 2). We believe that the data suggest, particularly since the trend of both Tables 9a and 9b is toward higher individuating mothers having higher achieving children, the hypothesis of developmental changes in maternal role behavior relative to children's academic efforts. The obtained significant correlation of .31 between maternal warmth and children's independence at Time III, primarily due to differences between Achievers and the other groups (Table 7) also supports this view.

Children in Group I in Table 9b attended nine different elementary schools, with a maximum of two in three different schools; children in Group II attended six different schools with a maximum of two in four different schools. In all, 12 different schools are represented. There was also an overlap of three schools between these two groups, accounting for six pupils in Group I, five in Group II.

Whereas specific school effects are probably random, it is important to note the sex differences between Groups I and II. In Table 9a, only three of the nine children in Group I are male, while in Group II, five of the seven are male. In Table 9b, six of the 12 children in Group I are male, while seven of the children in Group II are male. The data suggest that <u>females</u> are the most vulnerable to the impact of the schooling experience. Male children tend to be the poorer achievers in this sample, as in white elementary school populations, but it is the subsequent lower levels of performance by females after school entry who cause the apparent cumulative deficit, relative to the total group.

Discussion

To summarize, these longitudinal data suggest an early impact of the schooling experience upon these children and possibly their families. This impact is evident despite the status, relative to both maternal and child attributes, prior to kindergarten entry. This suggests that for this population the schooling experience is discontinuous. The impact has implications for both personal-social and cognitive performance outcomes, insofar as both are school-related. Teacher evaluations and judgments interact with parental influences to produce these outcomes. Parent-to-child or teacher-to-child models are too simplistic for characterization of minority children's achievement behaviors, particularly once they are engaged in formal schooling for an extended period.

These findings do not imply that early education is without intrinsic value. Clearly, mothers who, in 1965, reported behaviors which are cognitively stimulating had children who, upon school entry, were better prepared for a variety of intellectual efforts. Rather, the findings imply that early education, without direct intervention into, and assessment of, the primary grade classrooms that minority children attend, could have unrealistic programmatic expectations. Sustained intellectual growth and development once the child does enter school depends, we believe, upon the quality of the relationship established between parent, teacher and child. Early educators will wish to design follow-up studies to examine this issue. It would be extremely important to establish, in any follow-up studies that do report long-term benefits from activities prior to school entry, that receiving schools and teachers were unaware of the children's earlier preschool activities.

In conclusion, we need research designs which simultaneously characterize the interpersonal ecology of both home and school environments, if we are to

understand children's school achievements. Such studies may have to be longitudinal but they will be multivariate. We need programs which simultaneously emphasize the ecology of home and school contexts, if they are to influence patterns of achievement socialization. We need to consider the reciprocal interactions between the child and all his significant others, if we are to encourage his personal-social development. Most important, perhaps, we need to reconsider Durkheim's (1911) early proposition that education is but the mirror of society. This would be a reconsideration from the perspective of childhood development and outcomes, rather than societal and school social structures, as originally intended by Durkheim himself.

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Chart 1. Listing of Maternal Variables Assessed

		TIME I (July, 1965)	TIME III (September, 1973)
1.	Concepts used by the mother	X	X
2.	Individuation of the child's personality	X	X
3.	Cognitive controls used by the mother	X	X
4.	Value for school achievement	X	X
5.	Warmth towards the child	X	X
6.	Social contacts of the mother	X	X
7.	Cooperation with the interviewer	X	X
8.	Maternal individuation*	X	X
9.	Potency with schools	X	X
10.	Traditionalism in educational orientation	X	X
11.	Esteem for teachers and curriculum	X	X
12.	Change in family life over the past eight years, 1965-73		X

*Measurement of this variable is the average sum score of variables 1-3.

Chart 2. Listing of Child Variables Assessed

	TIME I (July, 1965)	TIME II (Sept. 1965-June 1971)	TIME III (April, 1973)
Child Personality Variables			
Verbal Social Participation*	X		X
Independence*	X		X
Achievement Motivation*	X		X
Self-Esteem			X
Satisfaction with School			X
Sense of Potency			X
Child Achievement Variables			
Teacher Evaluation - Reading		X	
Teacher Evaluation - Language		X	
Teacher Evaluation - Mathematics		X	
Teacher Evaluation - Conduct		X	
Test Evaluation - Reading Skills		X	
Test Evaluation - Mathematic Skills		X	
Test Evaluation - Verbal Aptitude		X	
Test Evaluation - Quantitative Aptitude		X	
Test Evaluation - Intelligence Quotient	X		

*These ratings were made by both teachers and observers trained in child development in preschool; however, in 1973 resources were available only for repeat of the child development observers' evaluations.

Chart 3. Categories by Grade of Judgments of Pupil Progress

Grade	Area: Reading	Language	Mathematics
Kindergarten	Interested in stories, poems, and books; Recognizes likenesses and differences; Interprets the meaning of pictures 4*	Listens to learn; Follows directions; Contributes to discussion and planning; Learns and uses new words 4	Recognizes numerals 1-10; Is learning the meaning of numbers 2
Grade I	Shows desire to read; Is acquiring a sight vocabulary; Comprehension; Word attack skills 4	Listens attentively; speaks easily and to the point; Forms letters correctly; Spaces letters and words; Writes stories 5	Uses numbers with understanding; Writes numberals correctly; Is learning number combinations 3
Grades II, III	Shows desire to read; Sight vocabulary; Comprehension; Phonics and word attack skills 4	Listens attentively; Speaks fluently; Uses correct English; Forms letters correctly; Spaces letters and words; Organizes written work 6	Uses numbers with understanding; Number combinations; Growth in accuracy; Understands and solves thought problems 4
Grades IV, V	Comprehension; Interpretation; Vocabulary; Word attack skills 4	Oral expression; Written expression 2	Number facts; Reasoning; Computation 3

*=No. subcategories (distinguished by each new semicolon)

Table 1. Intercorrelations of Maternal and Child Achievement Variables at Time I

	Binet MA (Preschool) (56)	Binet IQ (Preschool) (56)	Metropolitan Readiness (Kindergarten) (56)
Child Variables (Preschool)			
1. Verbal-Social Participation - Teacher	-35**	-25**	-31**
2. Verbal-Social Participation - Observer	-34**	23*	-17
3. Independence - Teacher	-18	-12	-23*
4. Independence - Observer	-08	04	-09
5. Achievement Motivation - Teacher	46**	40**	57**
6. Achievement Motivation - Observer	25*	17	32**
Maternal Variables (Preschool)			
7. Mo Concepts	26*	29*	03
8. Mo Individation of Child	25*	28*	13
9. Mo Controls with Child	42**	39**	37**
10. Mo Value for School Achievement	25*	34**	19
11. Mo Warmth	14	14	14
12. Mo Social Contacts	21*	22*	11
13. Maternal Individuation	40**	41**	22*
14. Mo Potency #	43*	34**	45**
15. Mo Trad. Educ. Orientation#	33**	30**	50**
16. Mo Esteem for Teachers & Curriculum#	53**	41**	71**

**p ≤ 01
*p ≤ 05
= N's = 53-50

N.B. Child personality: Significance levels of 05 or better occurred only between maternal control style, teacher/observer perceptions of achievement motivation and teacher perception of the child's verbal-social participation.

Time I (N=40)	Scale	Time III (N=40) 1	2	3	4	5	6	7	8	9	10
Mo Concepts	1	20	48**	53**	52**	36*	53**	83**	14	04	-05
Mo Individ of Child	2	14	16	37**	20	26	20	75**	-04	-06	-11
Mo Controls with Child	3	23	17	15	51**	54**	36*	80**	-10	-05	05
Mo Value for Schl. Ach.	4	22	32*	33*	36*	35*	26	54**	20	-10	32*
Mo Warmth	5	29	07	24	27	42**	50**	47**	15	-08	00
Mo Social Contacts	6	26	01	07	32*	00	43**	44**	11	24	-08
Maternal Individuation	7	25	24	27	33*	51**	36*	30*	-00	-04	-03
Potency with Schools	8	32*	-04	-06	13	05	02	02	-00	-05	32*
Traditional Ed. Orient.	9	-04	16	08	19	00	-09	08	-01	-17	04
Esteem for Teachers and Curriculum	10	-01	-03	-03	15	01	-29	04	-29	09	19

Table 2. Intercorrelations of Time III Maternal Variables with: (a) Time I Maternal Variables and (b) Time III Maternal Variables

$p \leq .01$**
$p \leq .05$*

Child Variables (Grade 6)	Child Achievement Variables: Binet MA (Preschool) (56)	Binet IQ (Preschool) (56)	Metropolitan Readiness (Kindergarten) (53)	STEP Reading (Grade 4) (50)	STEP Math (Grade 4) (51)	SCAT Verbal (Grade 4) (46)	SCAT Quan (Grade 4) (42)
Verbal-Social Participation	-10	-01	-25	-24	-07	-30*	-36*
Independence	-38**	-36**	-33**	-46**	-10	-38**	-28
Achievement Motivation	31**	27*	24	38**	13	12	18
Self-Esteem	44**	39**	47**	34**	17	29*	24
Satisfaction with School	10	14	01	02	-20	-02	-06
Potency	27*	18	16	12	04	32*	-06
Maternal Variables (Grade 6)[1]							
Mo Concepts...	04	-02	15	-06	07	-01	22
Mo Individuation of Child	31*	24	34*	13	33*	32	36*
Mo Controls with Child	22	24	41**	15	16	08	11
Mo Value for Schl. Ach.	46**	43**	40**	23	15	09	27
Mo Warmth	30*	37**	23	04	22	14	22
Mo Social Contacts	10	18	-00	-22	09	-09	00
Maternal Individuation	24	19	36*	11	23	16	24
Mo Potency	-01	07	-28	08	27	-19	01
Mo Trad. Educ. Orient.	03	03	04	20	23	-03	06
Mo Esteem for Teachers and Curriculum	17	08	20	38*	06	-08	27
Mo Change in Family Life over Eight Years, 1965-1973	-38**	-37**	-14	-18	03	-21	-02

Table 3. Relation Between Selected Child Achievement Measures and Child and Maternal Variables at Grade Six
(correlations)

**p≤01
*p≤05

[1] N's on maternal variables range from 40-30

Teacher Evaluations	Maternal Variables: Value for School Achievement		Warmth Towards Child		Social Contacts of Mother		Maternal Individuation		Potency		Traditional Educational Orientation		Esteem for Teachers and Curriculum		Perceived Change in Family Life over 8 years
	T1 (44-48)	T3 (33)	T1 (44-48)	T3 (33)	T1 (44-48)	T3 (33)	T1 (44-48)	T3 (33)	T1 (40-42)	T3 (32-34)	T1 (40-42)	T3 (32-34)	T1 (40-42)	T3 (32-34)	T3 (40-32)
Kindergarten															
Reading	04	43**	04	27	02	15	21	14	-25	18	07	00	15	11	-16
Language	13	48**	14	26	12	08	34*	20	-10	-03	06	-14	14	08	-38*
Mathematics	10	31	-06	16	08	03	15	-05	-06	-17	07	03	-19	16	11
Conduct	20	37*	29*	36*	19	07	50**	16	-19	-05	-05	-16	12	10	-39*
Grade One															
Reading	-08	20	03	20	06	08	20	-08	-00	19	02	-03	-09	20	-27
Language	-11	22	08	41**	10	03	16	-01	12	27	02	-17	05	23	-32
Mathematics	03	46**	13	51**	11	12	29*	06	-02	16	10	-29	01	19	-43**
Conduct	-11	22	08	49**	15	18	18	11	-08	06	15	-03	02	06	-26
Grades 2-3															
Reading	-06	-08	-10	02	10	02	01	-14	04	-18	02	-12	-22	27	-14
Language	-04	09	-02	29	19	05	13	-00	12	-04	10	-11	-05	10	-41*
Mathematics	-20	-10	-06	09	-11	-12	02	-12	09	04	15	14	10	21	-18
Conduct	-09	26	16	25	00	-20	22	13	25	05	09	-24	-10	24	-11
Grades 4-5															
Reading	-05	-08	18	33	05	08	-04	10	09	10	-12	08	-06	03	-21
Language	-21	08	02	-09	08	-21	04	03	14	-02	-19	-35*	06	05	-32
Mathematics	00	-01	34*	37*	08	12	17	16	00	19	06	02	11	22	-50**
Conduct	-03	-12	07	02	11	-23	08	07	30*	-08	-20	-17	-30*	-15	-09

Table 4. Relationship Between Teacher Evaluations in Grades K-5 and Maternal Variables in Preschool (Time I) and Grade Six (TimeIII) (correlations)

**p≤01
*p≤05

Teacher Evaluations	Child Personality Variables: Verbal-Social Participation			Independence			Achievement Motivation	
	Teacher (Preschool) (48-45)	Observer (Preschool) (48-45)	Observer (Grade 6) (48-45)	Teacher (Preschool) (48-45)	Observer (Preschool) (48-45)	Observer (Grade 6) (48-45)	(Teacher) (Preschool) (48-45)	Observer (Preschool) (48-45)
Kindergarten								
Reading	-28	-07	-15	04	04	-09	32*	24
Language	-43**	-21	-24	-43**	-21	-30*	47**	31*
Mathematics	-24	-15	-14	-15	-09	-24	13	-06
Conduct	-20	-11	-07	-11	-04	-27	36**	31*
Grade One								
Reading	-28	-10	-20	-25	-25	-34*	26	15
Language	-02	06	-21	-02	06	-37**	17	18
Mathematics	-13	02	-04	-25	-10	-17	33*	16
Conduct	-18	-18	-02	-02	-23	-09	10	17
Grades Two - Three								
Reading	-16	-15	-27	-26	-11	-41**	21	05
Language	-22	-24	09	-22	-24	-07	38**	14
Mathematics	-27	-06	-25	-14	-07	-32*	38**	12
Conduct	08	05	-01	-02	-21	-09	20	-07
Grades Four - Five								
Reading	-19	-17	-29*	-18	-22	-44**	18	11
Language	-05	02	-16	-05	02	-23	15	01
Mathematics	-32*	-31*	-29*	-17	-05	-57**	42**	13
Conduct	12	18	-14	-17	-27	-38**	20	06

**p≤01
*p≤05

Table 5. Relationship Between Teacher Evaluations and Child Personality Variables in Preschool and Grade Six (correlations)

Observer (Grade 6) (48-45)	Coopersmith Self-Esteem (Grade 6) (48-45)	Meadors-Satisfaction with School (Grade 6) (48-45)	Coleman-Potency (Grade 6) (48-45)
03	38**	07	12
10	34**	08	13
32*	35**	37**	23
09	10	18	02
32*	19	-02	14
28	07	03	01
21	12	05	04
18	20	06	09
32*	26	10	16
27	23	14	11
52**	22	-00	18
11	34*	22	13
28	21	16	20
09	13	-17	08
23	18	-01	12
18	18	24	12

Table 5, continued

Table 6. Differences in Time I Maternal and Child Variables by Subsequent Child Achievement Group

Maternal Variables		Group I Antiachievers (N = 15)	Group II Nonachievers (N = 12)	Group III Proachievers (N = 5)	Group IV Achievers (N = 24)	F Ratio	Significance
1. Concepts used in Family Problem-Solving	mean	3.07	2.50	3.40	3.21	0.8635	NS
	s.d.	1.53	1.09	0.89	1.44		
2. Individuation of Child Personality	mean	4.33	3.67	4.60	4.37	0.6088	NS
	s.d.	2.09	1.67	1.34	1.44		
3. Maternal Control Style	mean	4.13	3.08	3.60	4.29	2.0188	NS
	s.d.	1.41	1.31	0.55	1.65		
4. Value for School Achievement	mean	4.13	3.67	5.00	4.25	1.3272	NS
	s.d.	1.19	1.37	0.70	1.39		
5. Warmth to Child	mean	3.73	4.58	4.00	4.91	1.9217	NS
	s.d.	1.67	1.44	1.58	1.56		
6. Diversity of Maternal Social Contacts	mean	3.73	2.83	3.40	3.33	0.9876	NS
	s.d.	1.47	1.58	1.14	1.16		
7. Maternal Individuation+	mean	3.82	3.16	3.86	4.09	1.9536	NS
	s.d.	1.37	0.94	0.70	1.02		
8. Maternal Potency in Schools#	mean	2.84	2.96	2.60	2.77	0.3006	NS
	s.d.	0.51	0.71	1.5[illegible]	0.67		
9. Maternal - Traditional View of School#	mean	2.36	2.52	1.42	2.55	3.0344	$p \leq .05$
	s.d.	0.77	0.76	0.50	0.64		
10. Maternal Esteem for School#	mean	1.85	1.98	1.68	1.97	0.7163	NS
	s.d.	0.50	0.37	0.70	0.37		

+Measured by the average sum score of variables 1-3.
#N's = 14, 12, 4, 21 respectively for Groups I-IV.

(Table 6 continued on next page)

CONTINUATION OF TABLE 6.

Child Variables		Group I Antiachievers (N = 15)	Group II Nonachievers (N = 12)	Group III Proachievers (N = 5)	Group IV Achievers (N = 24)	F Ratio	Significance
11. Teacher - Verbal-Social Participation	mean	4.20	5.50	4.20	4.38	1.8427	NS
	s.d.	1.82	1.09	1.64	1.64		
12. Observer - Verbal-Social Participation	mean	4.93	6.00	4.20	4.62	3.1758	$p \leq .05$
	s.d.	1.38	0.85	2.17	1.44		
13. Teacher - Independence	mean	4.13	4.33	4.20	3.42	2.1002	NS
	s.d.	1.50	1.23	1.48	0.88		
14. Observer - Independence	mean	4.33	4.17	3.20	3.50	1.9256	NS
	s.d.	0.90	1.19	2.17	1.35		
15. Teacher - Achievement Motivation	mean	5.53	4.91	5.00	5.67	2.1951	NS
	s.d.	0.64	1.24	1.41	0.76		
16. Observer - Achievement Motivation	mean	5.40	4.92	4.80	5.42	0.9194	NS
	s.d.	0.91	1.31	0.83	1.14		

Table 7. Differences in Time III Maternal and Child Variables by Previous Child Achievement Group

Maternal Variables		Group I Antiachievers (N = 10)	Group II Nonachievers (N = 8)	Group III Proachievers (N = 4)	Group IV Achievers (N = 18)	F Ratio	Significanc
1. Concepts used in Family Problem-Solving	mean	4.20	3.88	5.50	3.94	1.1032	NS
	s.d.	1.62	2.03	1.29	1.47		
2. Individuation of Child Personality	mean	5.00	4.38	5.25	5.11	0.4353	NS
	s.d.	1.94	1.68	1.71	1.61		
3. Maternal Control Style	mean	4.00	3.25	5.00	4.33	1.2181	NS
	s.d.	1.33	2.19	1.82	1.53		
4. Value for School Achievement	mean	4.90	3.50	4.75	4.39	1.1576	NS
	s.d.	1.66	2.00	0.50	1.61		
5. Warmth to Child	mean	4.80	4.25	3.75	5.72	3.0255	$p \leq .05$
	s.d.	1.62	1.62	1.91	1.17		
6. Diversity of Maternal Social Contacts	mean	4.80	3.62	4.50	3.89	1.0799	NS
	s.d.	1.69	1.68	1.91	1.41		
7. Maternal Individuation+	mean	4.41	3.80	5.28	4.43	1.1444	NS
	s.d.	1.35	1.70	1.26	1.11		
8. Maternal Potency in Schools	mean	3.49	3.92	3.82	3.60	0.5328	NS
	s.d.	0.99	0.51	0.24	0.85		
9. Maternal - Traditional View of School	mean	3.52	3.40	3.40	3.37	0.0738	NS
	s.d.	0.84	0.85	0.91	0.76		
10. Maternal - Esteem for School	mean	3.01	3.30	3.50	3.37	0.8459	NS
	s.d.	0.69	0.47	0.58	0.71		

+ = measured by the average sum of variables 1-3.

(Table 7 continued on next page)

CONTINUATION OF TABLE 7.

Child Variables		Group I Antiachievers (N = 15)	Group II Nonachievers (N =12)	Group III Proachievers (N = 5)	Group IV Achievers (N = 24)	F Ratio	Significan
11. Observer - Verbal-Social Participation	mean	3.47	4.42	3.20	3.33	1.8899	NS
	s.d.	1.06	1.31	1.30	1.58		
12. Observer - Independence	mean	3.40	5.00	3.40	2.96	5.9217	$p \leq .01$
	s.d.	1.24	0.95	1.14	1.65		
13. Observer - Achievement Motivation	mean	3.73	3.08	3.80	4.25	2.4858	$p \leq .05$
	s.d.	1.16	1.16	1.30	1.26		
14. Self-Esteem	mean	74.67	60.67	74.40	73.42	2.7151	$p \leq .05$
	s.d.	13.79	14.70	10.90	15.05		
15. Satisfaction with School	mean	61.60	58.25	61.00	62.70	1.0384	NS
	s.d.	8.30	5.05	8.12	7.16		
16. Sense of Potency	mean	7.60	6.67	7.60	7.25	0.9936	NS
	s.d.	1.50	1.67	1.67	1.33		

Table 8. Differences between Teacher-Identified Achievement Groups by Achievement Test Performance and Maternal Perceived Stability in the Home

		Stanford Binet IQ (Preschool)	STEP Reading (Grade 4)	MO Perceived Change in Family Life (Grade 6)
GROUP I (Antiachievers)	mean	97.6	234.6	2.33
	s.d.	12.88	4.24	1.32
	N	15	14	9
GROUP II (Nonachievers)	mean	79.1*	230.4	2.12
	s.d.	10.49	3.22	0.99
	N	12	9	8
GROUP III (Proachievers)	mean	88.8	236.8	3.50
	s.d.	18.33	5.62	1.29
	N	5	4	4
GROUP IV (Achievers)	mean	97.2	237.8	1.82
	s.d.	13.56	8.43	0.88
	N	24	23	17

*$p \leq .05$ for differences between Group II and Groups I and IV respectively.

Table 9a. Differences between Early (1965) High and Low Individuating Mothers by (a) Children's 1965 Stanford-Binet I.Q. Scores; (b) Children's 1970 STEP Reading Scores; and (c) Later (1972-73) level of Maternal Individuation

(N=40)

	Maternal Individuation (1965)	Stanford-Binet* I.Q. (1965)	STEP Reading (1970)	Maternal Individuation (1972-73)
GROUP I MOTHERS				
mean	5.47	103.2	236.2	4.76
s.d.	0.295	9.30	5.09	0.992
N	9	9	9	9
GROUP II MOTHERS				
mean	2.18	80.4	233.5	3.76
s.d.	0.500	7.68	4.76	1.296
N	7	7	6	7

Table 9b. Differences between Later (1972-73) High and Low Individuating Mothers by (a) Children's 1965 Stanford-Binet I.Q. Scores; (b) Children's 1970 STEP Reading Scores; and (c) Early (1965) Level of Maternal Individuation

	Maternal Individuation (1972-73)	Stanford-Binet I.Q. (1965)	STEP Reading (1970)	Maternal Individuation (1965)
GROUP I MOTHERS				
mean	5.93	93.9	237.6	4.38
s.d.	0.109	13.93	8.69	0.916
N	12	12	11	12
GROUP II MOTHERS				
mean	2.61	88.7	234.4	3.43
s.d.	0.178	14.29	3.10	1.311
N	10	10	7	10

*$p \leq .01$